Title (en)

OPTIMIZED INTEGRATED SYSTEM FOR SOLAR-BIOMASS HYBRID ELECTRICITY GENERATION

Title (de)

OPTIMIERTES INTEGRIERTES SYSTEM ZUR HYBRIDEN SOLAR-BIOMASSENSTROMERZEUGUNG

Title (fr)

SYSTÈME INTÉGRÉ OPTIMISÉ POUR PRODUCTION D'ÉLECTRICITÉ HYBRIDE SOLAIRE-BIOMASSE

Publication

EP 3130770 A1 20170215 (EN)

Application

EP 15777409 A 20150206

Priority

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- CN 2015072398 W 20150206

Abstract (en)

An optimized integrated system for solar-biomass hybrid electricity generation. A heat transfer oil outputted from a solar farm (1 and 2) of a solar thermal boiler system flows sequentially through a solar thermal evaporator (6) and a solar thermal heater (5) then back to a heat transfer oil storage tank (4) and is then delivered via a circulation oil pump (3) to the solar farm to complete a heat transfer oil circulation. Solar thermal steam produced by the solar thermal evaporator is delivered to a biomass boiler system (9) via a steam header (7). Auxiliary steam produced by a coal-fired or gas-fired or oil-fired auxiliary boiler (8) also is mixed with the solar thermal steam and delivered to the biomass boiler system via the steam header. The solar thermal mixed steam and steam produced by a biomass boiler itself are delivered to a turbo generator (10) to drive an electric generator (11) into generating electricity. The system simplifies solar thermal power generation system and equipment configurations, provides stable electricity generation, high thermal efficiency, and extended service life.

IPC 8 full level

F01K 11/02 (2006.01); **F01D 15/10** (2006.01); **F03G 6/06** (2006.01); **F03G 7/00** (2006.01); **F24S 90/00** (2018.01)

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Cited by

WO2020002471A1; WO2020002474A1; CN111306820A; CN111365698A; FR3083263A1; FR3083262A1

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BA ME

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